Thank you for sending the Draft Survey Units 344, 350, 351, 355 Project Reports, collectively known as Work Package #69, dated September 10, 2014, prepared for the Navy Base Realignment and Closure Program Management Office West by TetraTech EC, Inc. of San Diego. I appreciate the opportunity for EPA to review these reports.

Below are tables for survey units 344, 350, 351, and 355 showing the Navy's contractor's dose and risk estimates using RESRAD and EPA's dose and risk estimates using the PRG (Preliminary Remediation Goals) calculator at http://epa-prgs.ornl.gov/radionuclides/ <http://epa-prgs.ornl.gov/radionuclides/> to directly estimate the risk from measured contaminant concentrations. Soil concentrations at Survey Unit 348 are similar. The Navy's reports adequately demonstrates that the soil concentrations are sufficiently low that they fall within EPA's risk management range of $10^{-6}$ to $10^{-4}$.

While some formatting changes could make the reports more explicitly address CERCLA measures and help provide the reader with more context, EPA concurs with the Navy's finding that the Survey Units 344, 350, 351, and 355 sites are suitable for release from institutional controls with respect to radioactive contamination using Superfund criteria. EPA therefore accepts the present version of the four reports.

Survey Unit 344

| | Reported Mean Soil Concentration (net above background) | Navy (RESRAD) | | EPA (PRG Calculator) | |
|---|---|---|---|---|---|
| Radionuclide | pCi/gm | Estimated Dose Rate mrem/yr | Estimated Cancer Risk | Estimated Dose Rate mrem/yr | Estimated Cancer Risk |
| Backfill | | | | | |
| $^{90}$Sr | 0.145 | -- | -- | 0.0369 | 1.283E-06 |
| $^{137}$Cs | 0.020 | -- | -- | 0.0105 | 3.663E-07 |
| $^{226}$Ra | -0.132 | -- | -- | 0 | 0 |
| *Total* | | 0.5888 | 7.588E-06 | 0.0474 | 1.649E-06 |
| Trench Unit | | | | | |
| $^{90}$Sr | 0.071 | -- | -- | 0.0181 | 6.283E-07 |
| $^{137}$Cs | 0.019 | -- | -- | 0.0100 | 3.480E-07 |
| $^{226}$Ra | -0.153 | -- | -- | 0 | 0 |
| *Total* | | 0.3065 | 4.012E-06 | 0.0281 | 9.763E-07 |

NOTE 1: Where reported mean soil concentrations (net above background) are reported as values that are less than zero, I have based my dose and risk calculations on a soil concentration of zero.

NOTE 2: The PRG Calculator's slope factors now use updated dosimetry and a risk/dose coefficient of 11.4X10$^{-4}$ per mrem as described in *EPA Radiogenic Cancer Risk Models and Projections for the U.S. Population* EPA 402-R-11-001 dated April 2011 (also known as the *Blue Book*)

Survey Unit 350

| Radionuclide | Reported Mean Soil Concentration (net above background) pCi/gm | Navy (RESRAD) Estimated Dose Rate mrem/yr | Navy (RESRAD) Estimated Cancer Risk | EPA (PRG Calculator) Estimated Dose Rate mrem/yr | EPA (PRG Calculator) Estimated Cancer Risk |
|---|---|---|---|---|---|
| Backfill | | | | | |
| $^{90}Sr$ | 0.104 | -- | -- | 0.0264 | 9.204E-07 |
| $^{137}Cs$ | 0.021 | -- | -- | 0.0111 | 3.846E-07 |
| $^{226}Ra$ | -0.056 | -- | -- | 0 | 0 |
| *Total* | | 0.3176 | 4.163E-06 | 0.0375 | 1.305E-06 |
| Trench Unit | | | | | |
| $^{90}Sr$ | 0.100 | -- | -- | 0.0254 | 8.850E-07 |
| $^{137}Cs$ | 0.022 | -- | -- | 0.0116 | 4.029E-07 |
| $^{226}Ra$ | 0.101 | -- | -- | 0.2845 | 9.902E-06 |
| *Total* | | 1.655 | 2.669E-05 | 0.3215 | 1.119E-05 |

NOTE 1: Where reported mean soil concentrations (net above background) are reported as values that are less than zero, I have based my dose and risk calculations on a soil concentration of zero.

NOTE 2: The PRG Calculator's slope factors now use updated dosimetry and a risk/dose coefficient of $11.4X10^{-4}$ per mrem as described in *EPA Radiogenic Cancer Risk Models and Projections for the U.S. Population* EPA 402-R-11-001 dated April 2011 (also known as the *Blue Book* )

Survey Unit 351

| Radionuclide | Reported Mean Soil Concentration (net above background) pCi/gm | Navy (RESRAD) Estimated Dose Rate mrem/yr | Navy (RESRAD) Estimated Cancer Risk | EPA (PRG Calculator) Estimated Dose Rate mrem/yr | EPA (PRG Calculator) Estimated Cancer Risk |
|---|---|---|---|---|---|
| Backfill | | | | | |
| $^{90}Sr$ | 0.154 | -- | -- | 0.0392 | 1.363E-06 |
| $^{137}Cs$ | 0.020 | -- | -- | 0.0105 | 3.663E-07 |
| $^{226}Ra$ | -0.111 | -- | -- | 0 | 0 |
| *Total* | | 0.4003 | 5.201E-06 | 0.0497 | 1.729E-06 |
| Trench Unit | | | | | |
| $^{90}Sr$ | 0.074 | -- | -- | 0.0188 | 6.549E-07 |
| $^{137}Cs$ | 0.021 | -- | -- | 0.0111 | 3.846E-07 |
| $^{226}Ra$ | -0.091 | -- | -- | 0 | 0 |
| *Total* | | 0.2138 | 2.849E-06 | 0.0299 | 1.039E-06 |

NOTE 1: Where reported mean soil concentrations (net above background) are reported as values that are less than zero, I have based my dose and risk calculations on a soil concentration of zero.

NOTE 2: The PRG Calculator's slope factors now use updated dosimetry and a risk/dose coefficient of $11.4X10^{-4}$ per mrem as described in *EPA Radiogenic Cancer Risk Models and Projections for the U.S. Population* EPA 402-R-11-001 dated April 2011 (also known as the *Blue Book* )

Survey Unit 355

| Radionuclide | Reported Mean Soil Concentration (net above background) pCi/gm | Navy (RESRAD) Estimated Dose Rate mrem/yr | Navy (RESRAD) Estimated Cancer Risk | EPA (PRG Calculator) Estimated Dose Rate mrem/yr | EPA (PRG Calculator) Estimated Cancer Risk |
|---|---|---|---|---|---|
| Backfill | | | | | |
| $^{90}Sr$ | 0.152 | -- | -- | 0.0387 | 1.345E-06 |
| $^{137}Cs$ | 0.020 | -- | -- | 0.0105 | 3.663E-07 |
| $^{226}Ra$ | -0.141 | -- | -- | 0 | 0 |
| *Total* | | 0.2738 | 3.599E-06 | 0.0492 | 1.711E-06 |
| Trench Unit | | | | | |
| $^{90}Sr$ | 0.095 | -- | -- | 0.0242 | 8.407E-07 |
| $^{137}Cs$ | 0.019 | -- | -- | 0.0100 | 3.480E-07 |
| $^{226}Ra$ | -0.095 | -- | -- | 0 | 0 |
| *Total* | | 0.1829 | 2.441E-06 | 0.0342 | 1.189E-06 |

NOTE 1: Where reported mean soil concentrations (net above background) are reported as values that are less than zero, I have based my dose and risk calculations on a soil concentration of zero.

NOTE 2: The PRG Calculator's slope factors now use updated dosimetry and a risk/dose coefficient of $11.4X10^{-}$ per mrem as described in *EPA Radiogenic Cancer Risk Models and Projections for the U.S. Population* EPA 402-R-11-001 dated April 2011 (also known as the *Blue Book* )

Please feel free to contact me any time if you would like to discuss these comments.